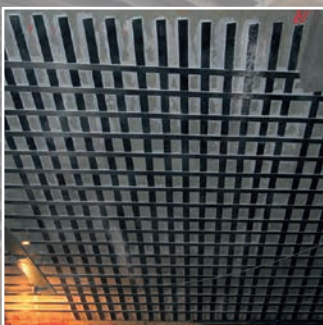


S&P FRP Systems

Structural reinforcement with
fibre composites

- S&P C-Laminate
- Pre-stressed S&P C-Laminate
- S&P Sheets



S&P FRP Systems

S&P FRP Systems are made from carbon, aramid and glass fibres, which are installed using tested and certified epoxy adhesives and saturants. In civil and structural engineering, FRP systems are used for static reinforcement of structures during conversions, system adaptations or building upgrades. Depending on the structure material (concrete, masonry, steel, wood) or static requirement (bending moment, shear force, normal force, seismic load), either S&P C-Laminates or S&P Sheets can be installed. In cases where it is required to combat larger deflection or vibrations, pre-stressed S&P C-Laminates are often the preferred option. The high strength, lightweight and corrosion resistant reinforcement products and systems can be used in many applications. With the help of the S&P Adhesive-forming unit and the S&P Wet-lay-up machine for the pre-impregnation of S&P Sheets, the application of the reinforcement on the construction site can be economically and efficiently improved.

ADVANTAGES

- Very high tensile strength
- Durable, corrosion resistant materials
- Low deadweight and building height
- Increases the durability
- Excellent behaviour in fatigue
- Water vapour permeable epoxy resin
- Special types upon request (cross section, E-Modulus)
- Simple, flexible and economic technology
- Advice/Engineering throughout all phases
- Own production facilities for laminates and sheets in Europe
- Tested system solution with system guarantee



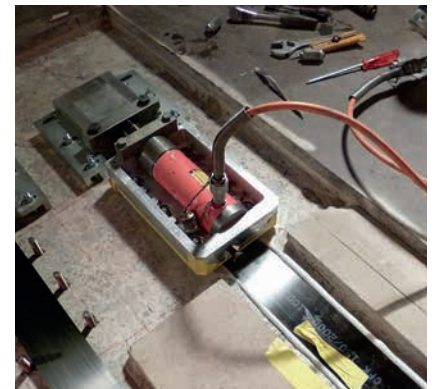
Application



1 Surface applied S&P C-Laminate (Bending)



2 Slot-applied S&P C-Laminate (Bending)



3 Pre-stressed S&P C-Laminate (Deflection)

Our product range at a glance

S&P C-Laminate (surface applied / slot-applied / pre-stressed)

Type SM * (150/2000) $E \geq 170 \text{ kN/mm}^2$

Type HM * (200/2000) $E \geq 205 \text{ kN/mm}^2$

* SM = Standard E-Modulus / HM = High E-Modulus

Cross sections from 10/1.4 to 150/1.4 mm

Cross sections from 20/1.4 to 120/1.4 mm

Roll length: 100 or 150 m *

Roll length: 100 or 150 m *

* or cut to size

S&P Sheets

Types S&P C-Sheet 240, S&P C-Sheet 640, S&P A-Sheet 120, S&P G-Sheet E/AR 50/50, S&P G-Sheet E/AR 90/10

Fibre weight from 200 g/m² up to 800 g/m² in the main fibre direction

Roll length 50 m or 100 m or cut to size

Roll width 300 or 600 mm depending on type

S&P Laminating Resin and Epoxy Adhesive

S&P Resin 55 HP (laminating resin)

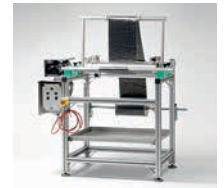
S&P Resin 220 (epoxy adhesive)

Delivery form single units or on pallets



Devices and Processing aids

Roll dispenser for laminates, adhesive-forming unit, wet-lay-up machine, rubber spatula, press roller (teflon), aramid scissors

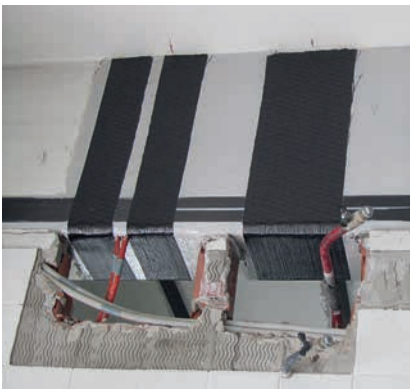


Design Software

FRP Lamella Design software for flexural and/or shear reinforcement with S&P FRP Systems

FRP Colonna Design software for reinforcement of centrally loaded concrete columns by wrapping S&P FRP Sheets

Please visit our website at www.sp-reinforcement.ch/en-CH for English detail:
Software/References/Technical data sheets/Text of specification/Research reports/Publications



4 Beam with S&P C-Sheet 640 (Shear force)



5 Column with S&P C-Sheet 240 (Normal force)



6 Strengthening of masonry with S&P G-Sheet (Seismic enhancement)



Every day we work hard to earn your business, blending the talents of our people with the quality of our products and services to exceed your expectations. This is our pledge to you.

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